

Having thus described the invention, it is claimed:

1. A valve mechanism to control fluid flow between a fluid pumping device and a system, comprising:
 - an inlet from the fluid pumping device, a first valve, a second valve, and a
 - 5 first outlet fluidly connected to the system;
 - wherein the second valve is operable to substantially completely check fluid flow through the valve to the first outlet when fluid pressure at the inlet is less than a first predetermined pressure;
 - wherein the second valve is operable to permit fluid flow from the fluid
 - 10 pumping device to the inlet and subsequently through the first outlet to the system only when fluid pressure at the inlet is greater than the first predetermined pressure;
 - wherein the first valve is operable to prevent backflow of fluid from the system substantially immediately subsequent to the fluid pumping device discontinuing pumping fluid to the system;
 - 15 and,
 - wherein the second valve is operable to prevent fluid pressure in the system from substantially exceeding a second predetermined pressure when the pumping device is not pumping fluid to the system.
- 20 2. The device of claim 1, wherein the second valve permits a limited portion of fluid from the fluid pumping device to flow to a second outlet of the valve mechanism.
3. The device of claim 2, wherein the second outlet of the valve mechanism is
- 25 fluidly connected to a venturi pump.
4. The device of claim 3, wherein the venturi pump is substantially adjacent the fluid pumping device.

5. The device of claim 1, wherein the fluid pumping device comprises a fuel pump contained within a fuel tank, and, wherein the system comprises a fuel system for an internal combustion engine.
- 5 6. The device of claim 1, wherein the first valve comprises a ball check valve and a first valve seat.
7. The device of claim 6, wherein the first valve seat includes a fluid bypass.
- 10 8. The device of claim 1, wherein the second valve comprises a plunger and a second valve seat.
9. A method to control fluid flow between a fluid pumping device and a system, comprising:
- 15 providing a valve mechanism, comprising an inlet from the fluid pumping device, a first valve, a second valve, a first outlet fluidly connected to the system, and a second outlet;
- wherein the second valve is operable to substantially completely check fluid flow through the valve to the first outlet when fluid pressure at the inlet is less than
- 20 a first predetermined pressure;
- wherein the second valve is operable to permit fluid flow from the fluid pumping device to the inlet and subsequently through the first outlet to the system only when fluid pressure at the inlet is greater than the first predetermined pressure;
- wherein the first valve is operable to prevent backflow of fluid from the
- 25 system substantially immediately subsequent to the fluid pumping device discontinuing pumping fluid to the system;
- wherein the second valve is operable to prevent fluid pressure in the system from substantially exceeding a second predetermined pressure when the pumping device is not pumping fluid to the system; and
- 30 wherein the second valve permits a limited portion of fluid from the fluid pumping device to flow to the second outlet of the valve mechanism.